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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/161,584      | 09/28/1998  | GUY NATHAN           | 871-52              | 7842             |

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EXAMINER

PENDLETON, BRIAN T

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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2644

22

DATE MAILED: 12/01/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/161,584

Applicant(s)

NATHAN, GUY

Examiner

Brian T. Pendleton

Art Unit

2644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 20 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 10-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 10-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schotz in view of Lee. Schotz discloses a digital wireless speaker system comprising a digital transmitter 22 having a digital transmission device 62 for converting digital audio into a serial bit stream, digital modulator 103, a digital receiver 24 having a demodulator 148, serial/parallel digital converter 214, digital/analog converter 216 and inherently a loudspeaker. The Schotz invention is directed to transmission of the digital signals over the air through the use of antennas, not via AC power lines. However, the use of AC power lines as a transmission medium for wireless speakers was well known in the art, as evidenced by Lee, whose invention discloses an audio signal distribution system using a processor 20, AC power outlet 20b, AC power line 24 and remote unit 26. The processor 20 contains a compressor and the remote unit 26 has a decompressor (expander). It would have been obvious to one of ordinary skill in the art at the time of invention to use AC power lines as the transmitter of the Schotz system as it was a well known alternate transmission medium. The benefits included a less bulky and cheaper system since antennae were not needed in addition to the flexibility of not using valuable radio frequency bandwidth. The combination was easily constructed by

including a compressor in the digital transmitter 22 of Schotz and a decompressor in the digital receiver 24. Digital modulator 103 uses quadrature phase shift keying, per claim 11. Although Lee teaches the use of frequency modulation for transmitting the digital signals through AC power line 24, it would have been obvious to keep the digital modulator 103 of Schotz since it reduced bandwidth requirements (see column 9 lines 61-65). Lee was only relied upon for the implementation of transmission through AC power lines which could have easily been employed in the Schotz reference by using simple power lines as the transmission medium and keeping the specific modulation scheme.

Claims 12, 13 and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schotz in view of Lee as applied to claim 11 above, and further in view of Anderson et al. The combination of Schotz and Lee disclose an audio distribution system comprising a digital compressor, transmission device, modulator, and receiver having a demodulator serial/parallel converter, decompressor, D/A converter and loudspeaker. The combination does not teach that the transmission device encodes a destination address into the digital signal packets that are sent to the receivers and whereby the receivers can compare their respective addresses to the destination address to determine if the packets are addressed to the receiving device. In the abstract, Anderson et al disclose a speaker system which uses control data transmitted with the digital audio data to specify how a selected speaker is to play the audio data. Thus, Anderson et al already taught the feature of sending a destination address with the digital audio and the receiver comparing the destination address to its own address. The control data of Anderson et al includes volume. It was conceivable

that the volume in the control data be set to zero. Therefore, the receiving device would have determined if audio data were intended for it, specifically, if the volume were greater than one. This feature would have been advantageous because it allowed a central distribution point the power to deliver digital audio to selected speakers without broadcasting the audio to unintended or unnecessary speakers. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include the teachings of Anderson et al in the invention described by the combination of Schotz and Lee. Schotz could have been easily modified to send destination addresses since it allowed the transmission device 62 to include subcode information with the digital audio information. As for claim 13, figure 1 of Anderson et al shows a plurality of digital inputs 15 which are connected to multiplexer 14. One of ordinary skill would have realized that the digital inputs could be different digital files each encoded with a destination address without undue experimentation since the main concept of addressing audio was already taught. Per claim 15, the "protocol" with which the audio data is serialized in the transmission device 62 was arbitrary, as any format with includes the address, audio data and begin and end markers would have sufficed. Per claim 16, control data is sent to the loudspeaker, as taught by Anderson.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schotz in view of Lee as applied to claim 10 above, and further in view of Brugger. Schotz and Lee do not disclose an encryption device in the transmitter and a decryption device in the receiver of the wireless speaker system. Nonetheless, it was well known, as evidenced by Brugger, at the time of invention to use encryption circuits and methods

for ensuring safe transportation of data without unauthorized access. Such a feature was beneficial for audio transfer since audio is often copyrighted and protected. Therefore, one would have been motivated to provide that feature in the combination of Schotz and Lee.

Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schotz in view of Lee in further view of Anderson et al as applied to claim 16 above, and further in view of Brugger. The combination of Schotz, Lee and Anderson et al do not disclose an encryption key as part of the "protocol". However, as stated above, encryption keys were well known in the art at the time of invention, as evidenced by Brugger. Any auxiliary information could have been included in the transmitted signal, as taught by Schotz column 8 lines 8-12. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include encryption keys in the subcoded information transmitted to receiving devices in the wireless speaker system taught by the combination of Schotz, Lee and Anderson et al.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian T. Pendleton whose telephone number is (703) 305-9509. The examiner can normally be reached on M-F 7-4:30.

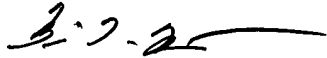
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester W. Isen can be reached on (703) 305-4386. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9314.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.



Brian Tyrone Pendleton  
November 17, 2003



XU MEI  
PRIMARY EXAMINER